

We claim:

1 1. A vessel, comprising:

2 a hull having multiple operating modes; and

3 a system operable to select one of the operating modes.

1 2. The vessel of claim 1 wherein the system comprises a ballast system that is  
2 operable to select one of the operating modes by adjusting the draft of the vessel to a  
3 level that corresponds to the selected operating mode.

1 3. The vessel of claim 1 wherein the system comprises a ballast system that is  
2 operable to select one of the operating modes by adjusting a level of ballast within the  
3 vessel.

1 4. The vessel of claim 1, further comprising:

2 a payload; and

3 wherein the system comprises a ballast system that is operable to select one of  
4 the operating modes by adjusting the draft of the vessel using the payload.

1 5. A water vessel, comprising:

2 a hull having a first hull portion and a second hull portion and having multiple  
3 operating modes; and

4 a ballast system disposed within the hull and operable to select one of the  
5 operating modes corresponding to a predetermined mission by adjusting the draft of the  
6 vessel.

1       6.     The vessel of claim 5 wherein the ballast system is operable to select a  
2     catamaran mode of operation by adjusting the draft of the vessel such that the hull is in  
3     a catamaran position with respect to the surface of the water.

1       7.     The vessel of claim 5 wherein the ballast system is operable to select a SWATH  
2     mode of operation by adjusting the draft of the vessel such that the hull is in a SWATH  
3     position with respect to the surface of the water.

1       8.     The vessel of claim 5 wherein the ballast system is operable to select a  
2     low-freeboard mode of operation by adjusting the draft of the vessel such that the twin is  
3     in a low-freeboard position with respect to the surface of the water.

1       9.     The vessel of claim 5 wherein the ballast system is operable to select a  
2     shallow-water mode of operation by adjusting the draft of the vessel such that the hull is  
3     in a shallow-water position with respect to the surface of the water.

1       10.    The water vessel of claim 5, comprising:

2              a payload; and

3              wherein the ballast system is operable to adjust the draft of the vessel using the  
4     payload.

1       11.    The water vessel of claim 5 wherein the first hull portion is parallel or  
2     approximately parallel to the second hull portion.

1       12.    A method, comprising:

2              selecting one of multiple hull modes for a water vessel; and  
3              operating the vessel in the selected hull mode.

1    13.    The method of claim 12 wherein selecting the hull mode comprises setting a draft  
2    of the water vessel to a level that corresponds to the hull mode.

1    14.    The method of claim 12 wherein the hull of the vessel, in the selected hull mode,  
2    has a corresponding hydrodynamic property that is related to a submerged portion of  
3    the hull.

1    15.    The method of claim 12 wherein selecting the hull mode comprises adjusting the  
2    draft of the water vessel to a corresponding level.

1    16.    The method of claim 12 wherein selecting the hull mode comprises adjusting the  
2    amount of ballast on the water vessel.

1    17.    The method of claim 12 wherein selecting the hull mode comprises adjusting the  
2    amount of payload on the vessel.

1    18.    The method of claim 12 wherein selecting the hull mode comprises adjusting the  
2    amount of payload and ballast on the water vessel.

1    19.    The method of claim 12 wherein selecting the hull mode comprises adjusting a  
2    position of a payload relative to the water line.